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pinnules are generally the longest, sometimes the upper series vary alternately with one or two as long as or longer than the lower, making an irregular outline. The shape of the segments and ultimate divisions varies considerably, but, in holding a fertile frond to the light, the general appearance is that of being finely cut into numerous ligulate divisions with cuneate bases. The young fronds before being unrolled (crosiers) are completely enveloped in a dense covering of whitish scales. The dimensions given for this species will no doubt be found to vary as more of it is collected. My thanks are due to Mr. Faxon for the pains he has taken with the drawing. The excellence and accuracy of his work is now too well known to need any special commendation, and the present drawing speaks for itself.

By a happy coincidence I am able to announce a double discovery by Mr. Pringle, and to accompany my description of his charming fern with a description by Mr. Peck of a new species of fungus found growing on the epidermis of the lamina in the form of pretty orange-colored dots, which, under the glass, resemble little cups filled with bright yellow spores. Mr. Peck has very kindly sent me his manuscript description, and expressed a wish to have it accompany my own description of the fern upon which the fungus grew, and it is accordingly given hereafter.

EXPLANATION OF PLATE XXXIV.—1. Plant, natural size. 2. Enlarged pinnule (second lower pinnule on second pinna). 3. Segment enlarged. 4. Lobe with one indusium turned back. 5. Scale from back of frond. 6. Scale from rhizoma. 7. Sporangium. 8. Spore.

A New Fern Rust.

By CHAS. H. PECK.

CÆOMA CHEILANTHIS, *n. sp.*—Spots indefinite, pallid or pale yellow; sori minute, rotund, slightly prominent, hypophyllous or occasionally amphigenous; spores globose or broadly obovate, regular, bright luteous or orange-colored, .00065 to .0009 of an inch long.

Living fronds of *Cheilanthes Pringlei*, Davenport, Arizona. May. Collected by C. G. Pringle; communicated by G. E. Davenport.

This fungus, though closely resembling *Cæoma filicum* Lk., (*Uredo filicum*, auct.), in external appearance, is readily distinguished from that species by its smaller, more regular and mostly globose spores. In *C. filicum* the spores are more or less angular and .0008 to .0011 of an inch long. In *C. Aspidiotus* (*Uredo Aspidiotus*, olim) which is regarded by some mycologists as a form of *C. filicum*, not only is the external habit different from that of both the preceding species, but also the prevailing form of the spores is more elongated and their length ranges from .0012 to .0017 of an inch.

Arceuthobium in New Hampshire.—I recently found near this place, in a swamp, on spruce trees, *Arceuthobium pusillum*, Peck (*A. minutum*, Engl.). The plants were in fruit (last season's plants), and the trees to which they were attached were in a dying condition. I have looked for *Arceuthobium* here before, but must have overlooked it, or it may be that it is of recent introduction here, which I doubt.

Hanover, N. H.

HENRY G. JESUP.